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APPLICATION NO 46 [REDACTED] FILING DATE 01/07/97

FIRST NAMED INVENTOR

ATTORNEY DOCKET NO. [REDACTED]

LM71/0131

DAVIDSON, DAVIDSON & KAPPEL, LLC
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EXAMINER [REDACTED]

ART UNIT 276 [REDACTED] PAPER NUMBER [REDACTED]

01/31/00

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

LM71/0131

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APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
08/946,315	10/07/97	045	KALINOWSKI, A	2761 01/31/00

First Named
Applicant

MAISNER, L

35 USC 154 (b) LEAD EXP. = 0 Days.

TITLE OF
INVENTION

VIRTUAL REALITY GENERATOR FOR DISPLAYING ABSTRACT INFORMATION
(AS AMENDED)

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEES DUE	DATE DUE
2000-0507-9	705-035,000	H53	UTILITY	YES	\$605.00	05/01/00

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT.
PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS
APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.

Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY

Notice of AllowabilityApplication No.
08/946,315

Applicant(s)

Marshall

Examiner

Alexander Kalinowski

Group Art Unit

2761

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

This communication is responsive to 1/6/2000

The allowed claim(s) is/are 85-129

The drawings filed on _____ are acceptable.

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

Applicant MUST submit NEW FORMAL DRAWINGS

because the originally filed drawings were declared by applicant to be informal.

including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 8.

including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

- Notice of References Cited, PTO-892
- Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- Notice of Draftsperson's Patent Drawing Review, PTO-948
- Notice of Informal Patent Application, PTO-152
- Interview Summary, PTO-413
- Examiner's Amendment/Comment
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- Examiner's Statement of Reasons for Allowance

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DETAILED ACTION

1. Claims 85-129 are presented for examination. Applicant filed an amendment on 1/6/2000.

In light of Applicant's arguments, amendments to the specification, drawings and Applicant's filing of Terminal Disclaimers, the Examiner withdraws the objections to the specification and claims, the grounds of rejection based on 35 USC 112(2) and the nonstatutory double patenting rejection. Therefore, claims 85-129 are allowed.

Terminal Disclaimer

2. The terminal disclaimer filed on 11/4/99 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 5,675,746 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Drawings

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 11/4/99 have been accepted.

4. In order to avoid abandonment, the drawing informalities noted in Paper No. 8, mailed on 7/7/1999, must now be corrected. Correction can only be effected in the manner set forth in the above noted paper.

5. **INFORMATION ON HOW TO EFFECT DRAWING CHANGES**

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1. Correction of Informalities -- 37 CFR 1.85; 1097 O.G. 36

New formal drawings must be filed with the changes incorporated therein. The art unit number, application number (including series code) and number of drawing sheets should be written on the reverse side of the drawings. Applicant may delay filing of the new drawings until receipt of the "Notice of Allowability" (PTOL-37 or PTO-37). If delayed, the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability" to avoid extension of time fees. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a) for filing the corrected drawings (but not for payment of the issue fee). The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

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Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the three month shortened statutory period set in the "Notice of Allowability" (PTO-37). Within that three month period, two weeks should be allowed for review of the new drawings by the Office. If a correction is determined to be unacceptable by the Office, applicant must arrange to have an acceptable correction re-submitted within the original three month period to avoid the necessity of obtaining an extension of time with extension fees. Therefore, applicant should file corrected drawings as soon as possible.

Failure to take corrective action within the set (or extended) period will result in

ABANDONMENT of the application.

Allowable Subject Matter

6. Claims 85-129 are allowed.

a. With respect to claims 85-97 and 118-125, the prior art does not disclose or suggest a virtual reality generator to display abstract information comprising an input module receiving input from an information source which generates the information as a function of a predetermined analysis of real time and pre-stored data and a user interface module including a first input selecting a categorical dimension and each of a first dimension of a multi-dimensional

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information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain and where the user interface module selects a portion of the abstract data as a function of the categorical dimensions and the numerical dimensions in combination with the other limitations of claim 85.

b. With respect to claims 98, 99, and 126-129, the prior art does not disclose or suggest a virtual reality generator to generate and display a stream of abstract information received from an analytic system comprising an input module continuously receiving the stream of abstract information from an analytic system generating abstract data as a function of a predetermined analysis of real time and pre-stored data and a user interface module including a first input selecting a categorical dimension and each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain and where the user interface module selects a portion of the abstract data as a function of the categorical dimensions and the numerical dimensions in combination with the other limitations of claim 98.

c. With respect to claims 100-109, the prior art does not disclose or suggest a virtual reality generator to display abstract information comprising an input module receiving input from an information source which generates the information as a function of a predetermined analysis of real time and pre-stored data and a user interface module including a first input selecting a

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categorical dimension and each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain and where the user interface module selects a portion of the abstract data as a function of the categorical dimensions and the numerical dimensions in combination with the other limitations of claim 100.

d. With respect to claims 110-114, the prior art does not disclose or suggest a virtual reality generator to display abstract information as an information terrain comprising an input module receiving input from an information source which generates the information as a function of a predetermined analysis of real time and pre-stored data and a user interface module including a first input selecting a categorical dimension and each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain and where the user interface module selects a portion of the abstract data as a function of the categorical dimensions and the numerical dimensions in combination with the other limitations of claim 110.

e. With respect to claim 115, the prior art does not disclose or suggest a virtual reality generator comprising an input module to receive packets of abstract information at predetermined intervals generated as a function of a predetermined analysis of real time and pre-stored data and a user interface module including a first input selecting a categorical dimension and each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-

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dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain and where the user interface module selects a portion of the abstract data as a function of the categorical dimensions and the numerical dimensions in combination with the other limitations of claim 115.

f. With respect to claim 116, the prior art does not disclose or suggest a computer based method for displaying and manipulating large quantities of information virtual reality generator to display abstract information comprising the steps of receiving as input preprocessed abstract information generated as a function of real time and pre-stored data and selecting a categorical dimension for each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a numerical dimension for a third dimension of the multi-dimensional information terrain and selecting a portion of the abstract data as a function of the categorical dimensions and the numerical dimensions for display in combination with the other limitations of claim 116.

g. With respect to claim 117, the prior art does not disclose or suggest a computer implemented method for displaying and manipulating large quantities of information virtual reality generator to display abstract information comprising continuously receiving as input preprocessed abstract information including real time and pre-stored data and the steps of selecting a categorical dimension for each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a numerical dimension for a third dimension of the multi-dimensional information terrain and selecting a portion of the abstract

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data as a function of the categorical dimensions and the numerical dimensions for display in combination with the other limitations of claim 117.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Kalinowski, whose telephone number is (703) 305-2398. The examiner can normally be reached on Monday to Thursday from 8:30 AM to 6:00 PM. In addition, the examiner can be reached on alternate Fridays.

If any attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Emanuel Todd Voeltz, can be reached on (703) 305-9714. The fax telephone number for this group is (703) 305-0040.

Alexander Kalinowski *AK*

1/18/00



STEPHEN R. TKACS
PRIMARY EXAMINER

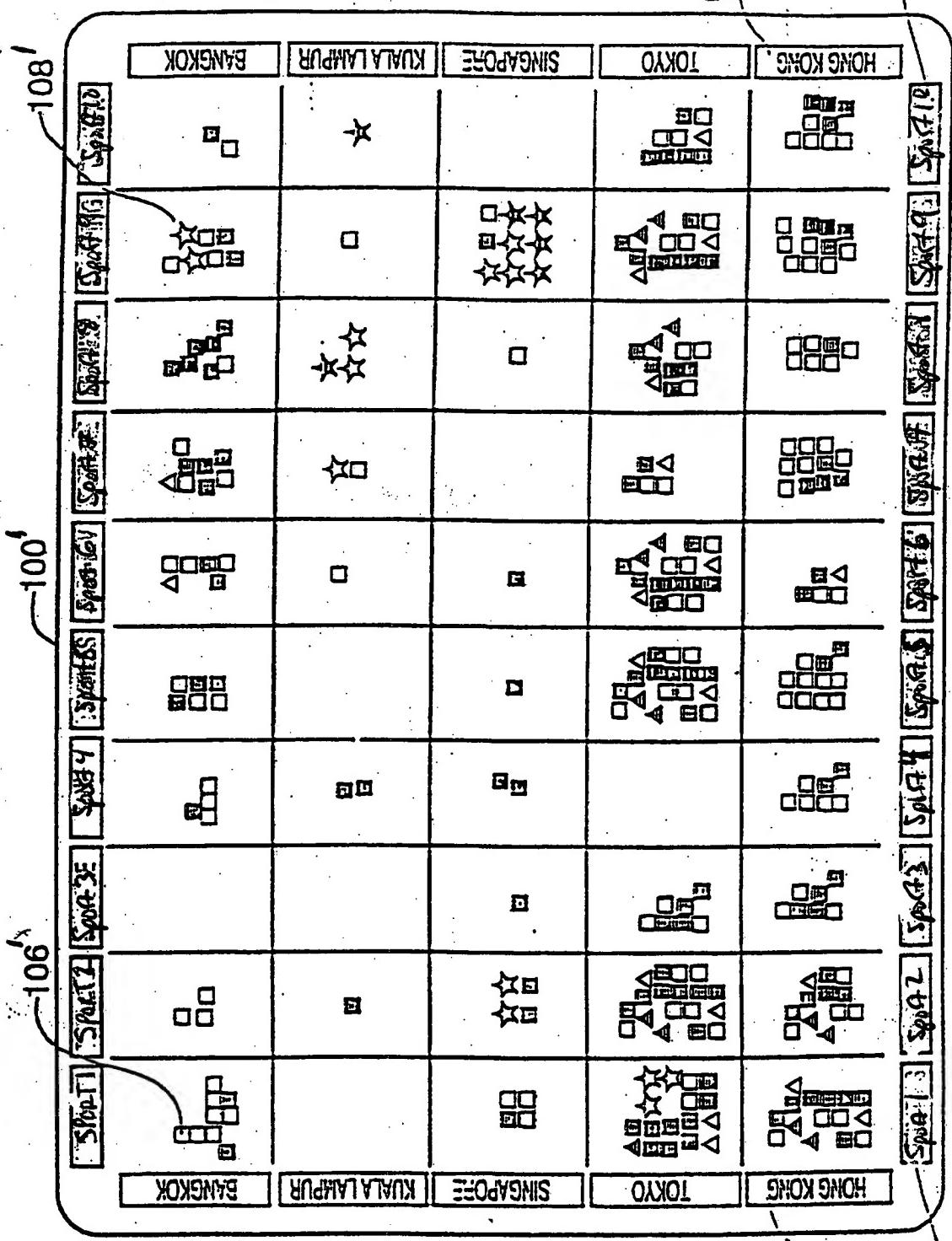


FIG. 72

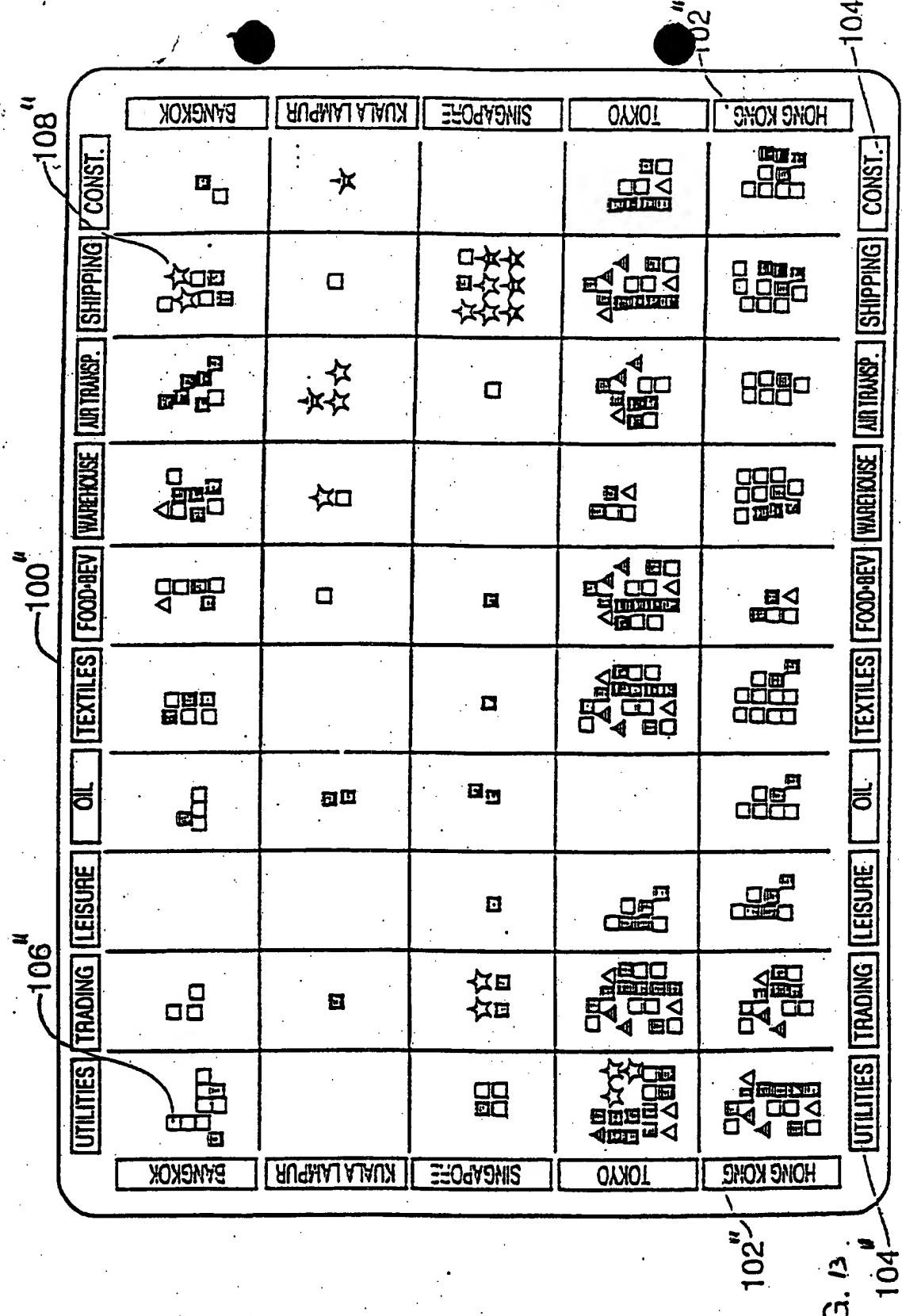


FIG. 13

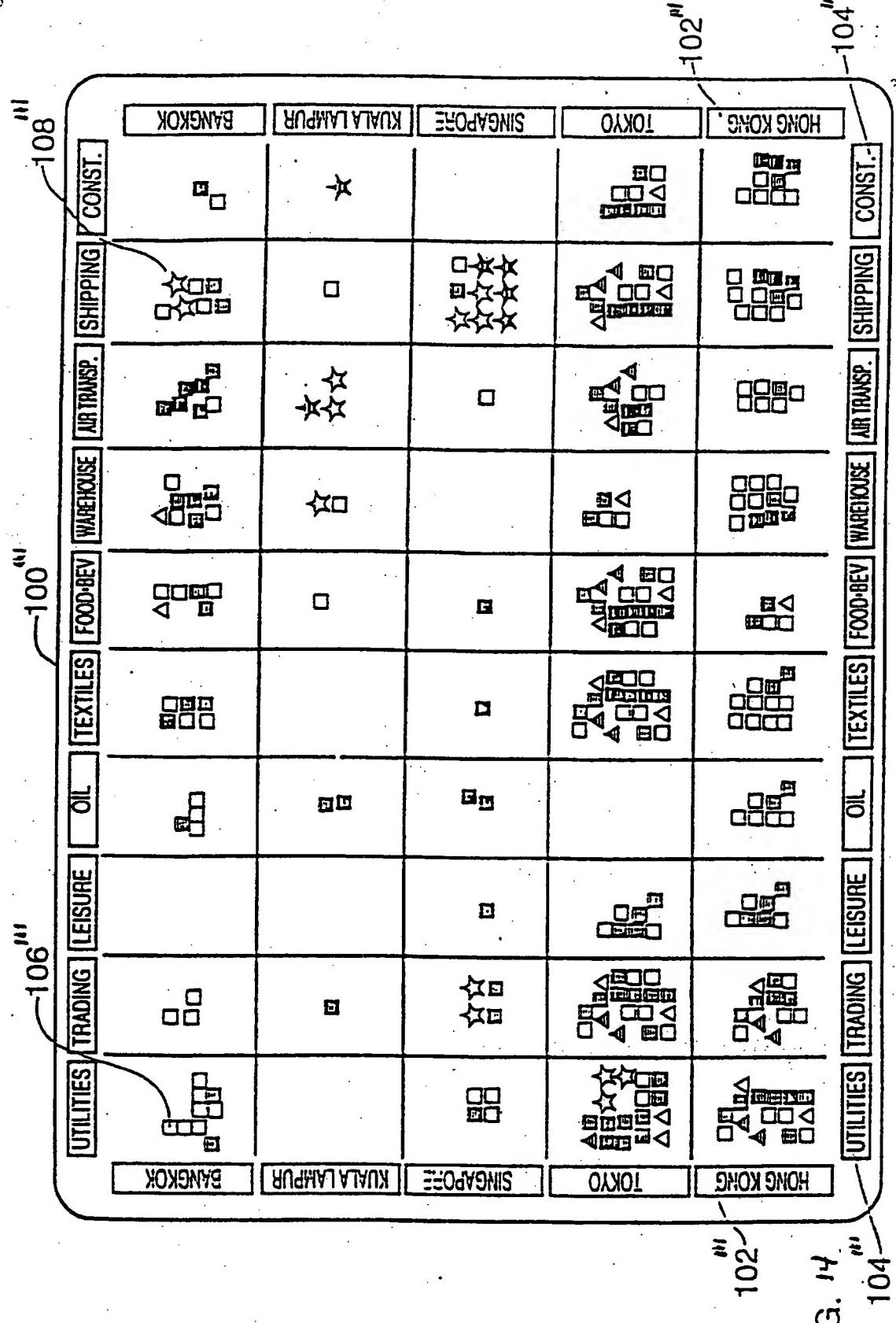


FIG. 14